Polynomial Factoring practice (version 50)

1. The quadratic formula says if $ax^2 + bx + c = 0$ then $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$. Use the quadratic formula to solve the following equation.

$$x^2 - 10x + 52 = 0$$

Simplify your answer(s) as much as possible.

2. Express the product of 7 + 8i and -4 - 5i in standard form (a + bi).

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3. Write function $f(x) = x^3 + 10x^2 + 19x - 30$ in factored form. I'll give you a hint: one factor is (x+5).

4. Polynomial p is defined below in factored form.

$$p(x) = (x+2)^2 \cdot (x-3) \cdot (x-8)$$

Sketch a graph of polynomial y = p(x).

